

PATENT COOPERATION TREATY

TRANSLATION

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:

Date of mailing
(day/month/year) **26.10.2004**

Applicant's or agent's file reference

HK0408PCT

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/JP2004/012759

International filing date (day/month/year)

27.08.2004

Priority date (day/month/year)

28.08.2003

International Patent Classification (IPC) or both national classification and IPC

F15B11/00

Applicant

HITACHI CONSTRUCTION MACHINERY CO., LTD.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/JP

Authorized officer

Facsimile No.

Telephone No.

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP2004/012759

Box No. I

Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐

This opinion has been established on the basis of a translation from the original language into the following language

_____, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).

2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

- a. type of material

☐

a sequence listing

☐

table(s) related to the sequence listing

- b. format of material

☐

in written format

☐

in computer readable form

- c. time of filing/furnishing

☐

contained in the international application as filed.

☐

filed together with the international application in computer readable form.

☐

furnished subsequently to this Authority for the purposes of search.

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

**WRITTEN OPINION OF THE
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International application No.

PCT/JP2004/012759

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims <u>1-6</u> Claims _____	YES NO
Inventive step (IS)	Claims _____ Claims <u>1-6</u>	YES NO
Industrial applicability (IA)	Claims <u>1-6</u> Claims _____	YES NO

2. Citations and explanations:

Document 1: JP 2000-154803 A
 Document 2: JP 2000-161302 A
 Document 3: JP 2-146279 A
 Document 4: JP 7-208344 A

The feature relating to a "first torque control means" and "second torque control means" set forth in claim 1 is disclosed in document 1 cited in the international search report as a feature relating to torque reduction control (the feature relating to control in procedure 110A and procedure 122A in the flowchart of fig. 9).

Meanwhile, as is evident from the "third torque control means" set forth in claim 1, control wherein "pump torque is gradually increased according to a predetermined rate of torque increase over time" does not involve an inventive step for the following reasons.

(1) Torque control by a "third torque control means" is no different in terms of wording from the matter which is described as a feature wherein pump torque is gradually increased according to a predetermined rate of torque increase over time from continuous torque control (control in procedure 140A in the flowchart in fig. 9) to

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International application No.

PCT/JP2004/012759

Box No. V

Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement

increasing torque control (control in procedure 162 in the flowchart in fig. 9) set forth in document 1 (paragraphs [0077] and [0085]).

(2) Torque control such as the "third torque control means" is disclosed in document 2 (paragraphs [0038], [0043]; fig. 5 and 6) cited in the international search report, and it would be easy for a person skilled in the art to employ said torque control set forth in document 2 in the continuous torque control and increasing torque control set forth in document 1.

(3) Document 3 cited in the international search report indicates that torque control is carried out using a "speed sensing control means" such as that set forth in claim 5 of this application, and it would be easy for a person skilled in the art to conceive of employing said torque control set forth in document 3 to the continuous torque control and increasing torque control set forth in document 1.

Document 4 (paragraph [0009]) indicates that torque control is corrected according to the "boost pressure", as set forth in claim 6 of this application.